

Response to First Office Action
Docket No. 028.0371.US.UTL

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (original): A method for converting directly synthesis gas to
2 hydrocarbons with high diesel distillates content through Fischer-Tropsch
3 process, wherein:
4 (1) the synthetic fuels with diesel distillates as primary products are
5 produced through one-step synthesis technique from synthesis gas;
6 (2) synthesis gas is composed of hydrogen and carbon monoxide with the
7 mole ratio of hydrogen to carbon monoxide within the range of 1 to 4;
8 (3) activated carbon supported cobalt based catalysts were employed;
9 (4) synthesis conditions comprise reaction temperature within the range of
10 120 to 400°C, reaction pressure within the range of 0.5 to 10.0 MPa, volume
11 hourly space velocity of mixture of hydrogen and carbon monoxide within the
12 range of 100 to 5000.
- 1 2. (original): A method of claim 1, wherein said Fischer-Tropsch
2 process is a non-shifting Fischer-Tropsch process over an activated carbon
3 supported cobalt based catalyst.
- 1 3. (original): A method of claim 1, wherein the diesel distillates
2 useful as a diesel fuel heavier than gasoline or as a blending component for a
3 distillate fuel comprising: 180 to 380°C fraction directly synthesized from
4 Fischer-Tropsch process and containing at least 95 wt % paraffins with an iso to
5 normal ratio of about 0.03 to 0.3, <50 ppm (wt) of sulfur and nitrogen, less than
6 about 2 wt % unsaturates, and about 0.001 to less than 0.3 wt % oxygen.
- 1 4. (original): The method of claim 3, wherein the oxygen is present
2 primarily as C₁₂ + linear alcohols.

Response to First Office Action
Docket No. 028.0371.US.UTL

1 5. (original): The method of claim 3, wherein the diesel fuels are
2 characterized by a cetane number of at least 60 to 70.

1 6. (original): The method of claim 3, wherein the content of nitrogen
2 and sulfur in fuels is less than or equal to 15 ppm (wt).

1 7. (original): The method of claim 6, wherein the content of nitrogen
2 and sulfur is less than or equal to 10 ppm (wt).

1 Claims 8-12 (cancelled).